

## **ETAILED ACTION**

### ***Status of Application, Amendments, And/Or Claims:***

Applicants' amendment of 14 August 2009 is acknowledged and made of record. Claims 5, 7, 16, 42 and 43 have been canceled. Claims 1, 2, 4, 6-8, 11-15, 17, 18, 23-28, 32-33 and 38 have been amended and the amendment made of record. Claims 44-48 are newly presented and entered.

### ***Information Disclosure Statement:***

The Information Disclosure statements (IDSs) submitted on the 14 August 2009, 14 October 2009, 28 October 2009, 16 November 2009, and 11 December 2009 have been considered. The signed copies are attached.

References A28-A37 on IDS submitted 23 May 2007 have been considered. The remaining references on the IDS have been lined through, as they have previously been considered; a reference may be cited only once on the face of the patent.

### ***Petition:***

It is noted that Applicants' petition of 14 July 2009 to expunge proprietary material has been dismissed on 17 July 2009; the Office determined that Petitioner may resubmit the petition subsequent to a Notice of Allowability being mailed in the instant Application. The Examiner has determined that the proprietary materials do not impact upon the patentability of the claims of the instant invention.

## **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Fraser on 16 and 17 December 2009.

Claim 1 now reads as follows:

1. An antibody comprising a single-chain polypeptide that binds to the thrombopoietin (TPO) receptor (Mpl), wherein said antibody comprises two heavy chain variable regions and two light chain variable regions, and at least one of the heavy chain variable regions comprises a set of CDR1, CDR2 and CDR3 sequences selected from the group consisting of:

(a) SEQ ID NOs: 27, 28, and 29;

(b) SEQ ID NOs: 36, 37, and 38; and

(c) SEQ ID NOs: 57, 58 and 59.

Claims 9 and 10 are canceled.

Claim 17 now reads as follows:

17. The antibody of claim 1, wherein at least one of the light chain variable regions comprises a set of CDR1, CDR2 and CDR3 sequences selected from the group consisting of:

(a) SEQ ID NOs: 84, 85, and 86:

(b) SEQ ID NOs: 93, 94, and 95; and

(c) SEQ ID NOs: 114, 115, and 116.

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Claim 18 now reads as follows:

18. The antibody of claim 1 comprising any one of:

(a) a heavy chain variable region that CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 27, 28, and 29, respectively, and a light chain variable region CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 84, 85, and 86, respectively;

(b) a heavy chain variable region that CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 36, 37, and 38, respectively, and a light chain variable region CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 93, 94, and 95, respectively; and

(c) a heavy chain variable region that CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 57, 58, and 59, respectively, and a light chain variable region CDR1, CDR2, and CDR3 comprising the amino acid sequences consisting of SEQ ID NOs: 114, 115, and 116, respectively.

Claims 19, 20, 21 and 22 are canceled.

Claim 23 now reads as follows:

23. (Currently Amended) The antibody of claim 1, wherein said at least one of the heavy chain variable regions comprises a set of FR1, FR2, FR3, and FR4 sequences selected from the group consisting of :

(a) SEQ ID NOs: 230, 232, 234, and 236; and

(b) SEQ ID NOs: 265, 267, 269, and 271.

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Claim 24 now reads as follows:

24. The antibody of claim 1, wherein said at least one of the light chain variable regions comprises a set of FR1, FR2, FR3, and FR4 sequences selected from the group consisting of:

(a) SEQ ID NOs: 239, 241, 243, and 245; and

(b) SEQ ID NOs: 272, 274, 276, and 278.

Claim 25 now reads as follows

25. The antibody of claim 1, comprising any one of:

(a) a heavy chain variable region FR1, FR2, FR3, and FR4 comprising the amino acid sequences consisting of SEQ ID NOs: 230, 232, 234, and 236, respectively, and a light chain variable region FR1, FR2, FR3, and FR4 comprising the amino acid sequences consisting of SEQ ID NOs: 239, 241, 243, and 245, respectively; and

(b) a heavy chain variable region FR1, FR2, FR3, and FR4 comprising the amino acid sequences consisting of SEQ ID NOs: 265, 267, 269, and 271, respectively, and a light chain variable region FR1, FR2, FR3, and FR4 comprising the amino acid sequences consisting of SEQ ID NOs: 272, 274, 276, and 278, respectively.

Claim 26 is amended as follows:

In line 3 of the claim, please delete "256, 262, 289, or 295" in between "229" and "."

In line 3 of the claim, please insert - - 140, 162, or - - in between "SEQ ID NO:" and "229"

Claim 27 is amended as follows:

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In line 3 of the claim, please delete "258, 291, or 297" in between "238" and "."

In line 3 of the claim, please insert - - 141, 163, or - - in between "SEQ ID NO:" and "238"

Claim 28 is amended as follows:

28. The antibody of claim 1, wherein

(a) at least one of the heavy chain variable regions comprises ~~comprising~~ the amino acid sequence of SEQ ID NO: 229, and ~~[[a]]~~ at least one of the light chain variable regions comprises the amino acid sequence of SEQ ID NO: 238;

(b) at least one of the heavy chain variable regions comprises the amino acid sequence of SEQ ID NO: 140, and a at least one of the light chain variable regions comprises comprising the amino acid sequence of SEQ ID NO: 141; or

(c) at least one of the heavy chain variable regions comprises the amino acid sequence of SEQ ID NO: 162, and a at least one of the light chain variable regions comprises comprising the amino acid sequence of SEQ ID NO: 163.

Claims 29, 34-37 and 39-41 are canceled.

Claim 44 is amended as follows:

In line 1 of the claim, please delete "preventing" in between "or" and "thrombocytopenia" and insert - - reducing the incidence of- - in between "or" and "thrombocytopenia"

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHULAMITH H. SHAFER whose telephone number is

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(571)272-3332. The examiner can normally be reached on Monday through Friday, 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol, Ph.D. can be reached on 571-272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shulamith H. Shafer/  
Examiner, Art Unit 1647

/Gary B. Nickol /

Supervisory Patent Examiner, Art Unit 1646